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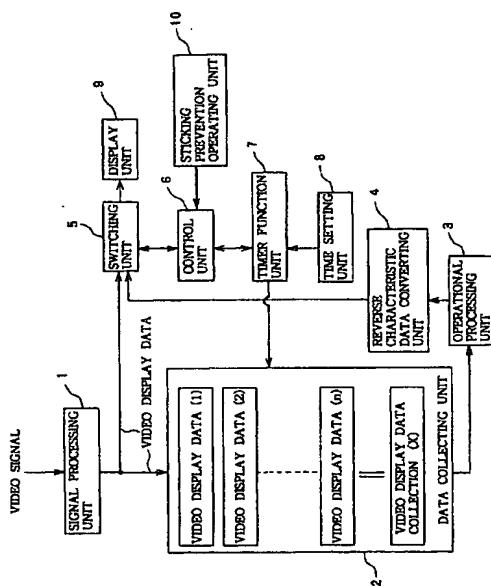
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(71) Applicant: NEC CORPORATION
Tokyo (JP)(72) Inventor: Ujiie, Katsuhiro, c/o NEC Corporation
Tokyo (JP)(74) Representative: Baronetzky, Klaus, Dipl.-Ing.
Splanemann, Reitzner, Baronetzky,
Patentanwälte,
Rumfordstrasse 7
80469 München (DE)

(54) Display with sticking preventing function and sticking preventing method

(57) A display which is applicable to a display for time display or the like and is capable of preventing sticking with a simple configuration. The display comprises a display unit for displaying an image with input of video display data including information on a brightness level of each display pixel constituting a screen, a data collecting unit for acquiring and accumulating video display data supplied to the display unit at certain time periods and for collecting brightness levels of the accumulated video display data for each display pixel, an operational processing unit for deriving an average value of the brightness levels for each display pixel from the collection result, a reverse characteristics data converting unit for obtaining reverse characteristic data with reversed brightness levels based on the average brightness level of each display pixel, and a control unit for causing the reverse characteristic data obtained by the reverse characteristic data converting unit to be displayed at the display means for a certain time period instead of the video display data.

Fig. 2





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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 3808

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 12, 26 December 1996 (1996-12-26) & JP 08 211858 A (FUJITSU GENERAL LTD), 20 August 1996 (1996-08-20) * abstract * * column 2, line 43 - column 3, line 10 * * column 3, line 40 - column 4, line 19 * * column 4, line 29 - column 4, line 35; figure 1 * ---	1,3-8, 10-12	G09G5/10
Y	EP 0 965 974 A (PIONEER ELECTRONIC CORP) 22 December 1999 (1999-12-22) * abstract; figures 1,2 * * column 8, line 8 - column 8, line 25 * * column 1, line 22 - column 5, line 45 * ---	1,3-8, 10-12	
Y	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 08, 30 June 1999 (1999-06-30) & JP 11 065541 A (FUJITSU GENERAL LTD), 9 March 1999 (1999-03-09) * abstract * ---	1,3-7	
A	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 09, 30 September 1997 (1997-09-30) & JP 09 114418 A (FUJITSU GENERAL LTD), 2 May 1997 (1997-05-02) * abstract * ---	1,7, 10-12	HO4N G09G
A	PATENT ABSTRACTS OF JAPAN vol. 1997, no. 01, 31 January 1997 (1997-01-31) & JP 08 251515 A (FUJITSU GENERAL LTD), 27 September 1996 (1996-09-27) * abstract * ---	1,7, 10-12 -/-	
<p>The present search report has been drawn up for all claims</p>			
Place of search	Date of completion of the search	Examiner	
MUNICH	21 May 2002	Wolff, L	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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EUROPEAN SEARCH REPORT

Application Number
EP 00 11 3808

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)						
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim							
A	PATENT ABSTRACTS OF JAPAN vol. 018, no. 180 (E-1531), 28 March 1994 (1994-03-28) & JP 05 344371 A (FUJITSU GENERAL LTD), 24 December 1993 (1993-12-24) * abstract *	3,4,7							
A	PATENT ABSTRACTS OF JAPAN vol. 1995, no. 03, 28 April 1995 (1995-04-28) & JP 06 332418 A (FUJITSU GENERAL LTD), 2 December 1994 (1994-12-02) * abstract *	3,4,7							
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)						
<p>The present search report has been drawn up for all claims</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Place of search</td> <td style="width: 33%;">Date of completion of the search</td> <td style="width: 34%;">Examiner</td> </tr> <tr> <td>MUNICH</td> <td>21 May 2002</td> <td>Wolff, L</td> </tr> </table> <p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application I : document cited for other reasons S : member of the same patent family, corresponding document</p>				Place of search	Date of completion of the search	Examiner	MUNICH	21 May 2002	Wolff, L
Place of search	Date of completion of the search	Examiner							
MUNICH	21 May 2002	Wolff, L							

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 11 3808

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-05-2002

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
JP 08211858	A	20-08-1996	NONE			
EP 0965974	A	22-12-1999	JP 2000010522 A EP 0965974 A1		14-01-2000 22-12-1999	
JP 11065541	A	09-03-1999	NONE			
JP 09114418	A	02-05-1997	NONE			
JP 08251515	A	27-09-1996	NONE			
JP 05344371	A	24-12-1993	NONE			
JP 06332418	A	02-12-1994	NONE			